

REMARKS

The Office Action mailed December 1, 2010, has been carefully reviewed and the following remarks have been made in consequence thereof.

Claims 1, 2, 4-9, 12, 14-16, 19-22, 24, and 27-33 are pending in this application. Claims 1, 2, 4-9, 12, 14-16, 19-22, 24, and 27-33 stand rejected. Claims 10, 11, 17, 23, 25, and 26 have been previously withdrawn and Claims 3, 13, and 18 have been previously canceled. Claims 1, 12 and 24 are amended.

Applicant thanks the Examiner for the interview conducted on March 10, 2011. The differences between the cited art and the pending claims were discussed. Applicant's representatives presented a proposed amendment and the Examiner agreed that the amendment would overcome the rejections of record for Claim 1, although further search and consideration was required. Agreement as to the allowance of the claims was not reached.

The rejection of Claims 1, 4, 8, 9, 12, 14-16, 19-21, 24, 27-29, 32, and 33 under 35 U.S.C. § 102(b) as being anticipated by Graebe (U.S. Pat. No. 4,541,136) is respectfully traversed. Initially, Applicant notes that there appears to be a typographical error in the heading of the rejection and that the reference to Claims 14 and 17-19 was in error. Applicant believes that the action should have referenced Claims 24 and 27-29 rather than 14 and 17-19. Applicant has responded to the rejection as such.

Claim 1 recites a method of fabricating a cellular cushion, wherein the method comprises "injecting material into a mold in an injection molding process to substantially simultaneously integrally form a cushion first layer with a plurality of hollow cells extending outward from the first layer, such that each of the plurality of cells extends only from a root defined at the first layer to a tip, and such that the plurality of cells extending from the first layer are coupled together in flow communication via a plurality of channels aligned substantially within the same plane and extend between adjacent hollow cells, and wherein the plurality of hollow cells are configured to expand only radially outward towards each as an operating pressure within the cells is increased . . . coupling a second layer to the first layer . . . coupling an injection stem in

flow communication to the plurality of hollow cells to enable an operating pressure within only the plurality of hollow cells extending from the same layer to be changed.”

Graebe describes a base (2) and a multiplicity of cells (4) projecting from base (2) generally parallel to each other. Base (2) consists of an upper sheet (26) and a lower sheet (28). Cells (4) are the same size and configuration and are arranged in transverse and longitudinal rows to form an array of rectangular configuration. Each cell (4) is symmetrical about a center axis X that is perpendicular to base (2) and includes a pedestal (10) and four fins (12) which extend upwardly from pedestal (10). Pedestal (10) is pyramidal and has four sloping side walls and is square where it merges onto base (2). Cells (4) are formed in one embodiment by dipping a mold in latex, while in another embodiment cells (4) may be made by injection molding. When made by injection molding, cells (4) are formed without pedestals (10).

Notably, Graebe does not describe nor suggest injecting material into a mold to substantially simultaneously form both a first cushion first layer that and a plurality of hollow cells. While Graebe discloses at col. 3, lines 56-57, that an upper sheet (26) is formed integral with cells (4), Graebe also discloses at col. 4, lines 20-24 that cells (4) and upper sheet (26) are integrally formed by dipping a form (34) in a latex bath. Dipping form (34) in a latex bath is *not* equivalent to forming cells (4) and upper sheet (26) via an injection molding process. Graebe also discloses another embodiment at col. 7, lines 12-19 in which *only* cells (4) are formed by injection molding. *Accordingly, Graebe does not disclose nor suggest a cushion first layer, such as upper sheet (26), that is substantially simultaneously integrally formed with cells (4) via an injection molding process. Rather, in contrast to the present invention, Graebe discloses that only cells (4) may be formed by injection molding.*

Furthermore, Graebe does not describe nor suggest that the cells (4) expand *only* radially outward towards each other as the operating pressure within each cell (4) is increased. Specifically, Graebe is silent with respect to the expansion of cells (4) only in a radial direction as the operating pressure within cells (4) is increased.

For at least the reasons set forth above, Claim 1 is submitted to be patentable over Graebe.

Claims 2 and 4-9 depend from independent Claim 1. When the recitations of Claims 2 and 4-9 are considered in combination with the recitations of Claim 1, Applicant submits that dependent Claims 2 and 4-9 likewise are patentable over Graebe.

Claim 12 recites a method for fabricating a flexible cushion, wherein the method comprises “forming a plurality of hollow cells with an injection molding process . . . coupling the plurality of cells to a flexible base such that the hollow cells are coupled to and extend outward from only one layer within the base and are adapted to be expanded outwardly towards each other as an operating pressure within the plurality of cells is increased . . . coupling a sealing layer to the flexible base such that the plurality of hollow cells are coupled together in flow communication with each other via a plurality of hollow channels and such that a plurality of fluid control devices defined by at least one of the base and the sealing layer extend between adjacent hollow cells, wherein the plurality of hollow channels are aligned substantially in the same plane and extend between adjacent hollow cells, and wherein each of the plurality of flow control devices is positioned against at least one of the hollow channels such that the plurality of fluid control devices defined between the base and the sealing layer selectively control flow communication independently of the plurality of hollow cells.”

Graebe does not disclose a method of fabricating a flexible cushion as is recited in Claim 12. Specifically, Graebe does not describe nor suggest coupling a plurality of hollow cells formed via an injection molding process to a base, such that the hollow cells are coupled to and extend outward from only one layer within the base, such that the cells are adapted to be expanded outwardly towards each other as an operating pressure within the plurality of cells is increased, in combination with coupling a sealing layer to the base such that the plurality of hollow cells are coupled together in flow communication with a plurality of hollow channels that are aligned substantially in the same plane and extend between adjacent hollow cells, wherein each of the plurality of flow control devices is positioned against at least one of the hollow channels such that the plurality of fluid control devices defined between the base and the sealing layer selectively control flow communication independently to each of the plurality of hollow cells.

Rather, in contrast to the present invention, Graebe discloses a method of making a base having a plurality of cells extending therefrom. Specifically, Graebe does not disclose the fluid control devices recited in Claim 12. In the rejection of Claim 12 on page 9 of the Office action, the Office does asserts that the channels 32 defined by the strips 30 of Graebe are equivalent to the claimed fluid control devices. However, these channels 32 merely provide a mechanism for the flow communication between adjacent cells 4. As stated in Graebe at col. 4, lines 5-7, “[t]he channels 32 do not collapse” Since these channels 32 do not collapse they necessarily permit air to flow therethrough to selectively control flow communication independently to each of the plurality of hollow cells, as recited in Claim 12.

Accordingly, for at least the reasons set forth above, Applicant submits that Claim 12 is patentable over Graebe.

Claims 14-16 and 19-22 depend from independent Claim 12. When the recitations of Claims 14-16 and 19-22 are considered in combination with the recitations of Claim 12, Applicant submits that dependent Claims 14-16 and 19-22 likewise are patentable over Graebe.

Claim 24 recites a method for fabricating an inflatable cushion, wherein the method comprises “forming a flexible base using an injection molding process by injecting material into a mold to integrally form a plurality of hollow cells with a base such that the plurality of hollow cells each extend outwardly from a root defined at the base to a tip and such that the plurality of cells are coupled together in flow communication via a plurality of channels aligned substantially within the same plane, wherein the plurality of hollow channels extend between adjacent hollow cells . . . coupling a second layer to the base such that a plurality of fluid control devices defined by at least one of the base and the second layer are each positioned between adjacent hollow cells to selectively control flow communication independently to each of the plurality of hollow cells extending outward only from the base, wherein each of the plurality of flow control devices is positioned against at least one of the plurality of channels such that each of the plurality of flow control devices selectively controls flow communication independently to each of the plurality of hollow cells.”

As described above in regards to the rejection of Claims 1 and 12, Graebe does not describe nor suggest a method of fabricating an inflatable cushion as is recited in Claim 24. Specifically, Graebe does not suggest nor describe forming a flexible base using an injection molding process by injecting material into a mold to integrally form both a plurality of hollow cells and a base such that plurality of hollow cells each extend outwardly from a root defined at the base to a tip and such that the plurality of cells are coupled together in flow communication via a plurality of channels aligned substantially within the same plane, in combination with coupling a second layer to the base such that a plurality of fluid control devices are each positioned between adjacent hollow cells to selectively control flow communication independently to each of the plurality of hollow cells extending outward only from the base, wherein each of the plurality of flow control devices is positioned against at least one of the plurality of hollow channels such that each of the plurality of flow control devices controls flow communication independently to each of the plurality of hollow cells.

Rather, in contrast to the present invention, Graebe discloses a method of making a base having a plurality of cells extending therefrom. Specifically, Graebe does not disclose the fluid control devices recited in Claim 24 for the same reasons set forth above in response to the rejection of Claim 12. Graebe also fails to disclose the integral forming of a flexible base and a plurality of hollow cells for the same reasons set forth above in response to the rejection of Claim 1.

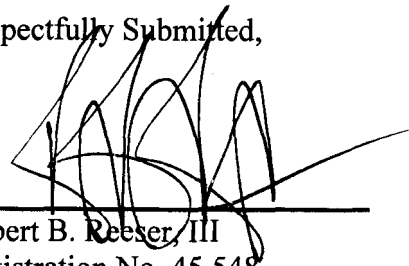
Accordingly, for at least the reasons set forth above, Applicant submits that Claim 24 is patentable over Graebe.

Claims 27-33 depend from independent Claim 24. When the recitations of Claims 27-33 are considered in combination with the recitations of Claim 24, Applicant submits that dependent Claims 27-33 likewise are patentable over Graebe.

Accordingly, for at least the reasons set forth above, Applicant respectfully requests the Section 102 and 103 rejections of Claims 1,2, 4-9, 12, 14-16, 19-22, 24, and 27-33 be withdrawn.

In view of the foregoing amendments and remarks, all the Claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'Robert B. Reeser, III', is written over a horizontal line. The signature is stylized with large, sweeping loops.

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